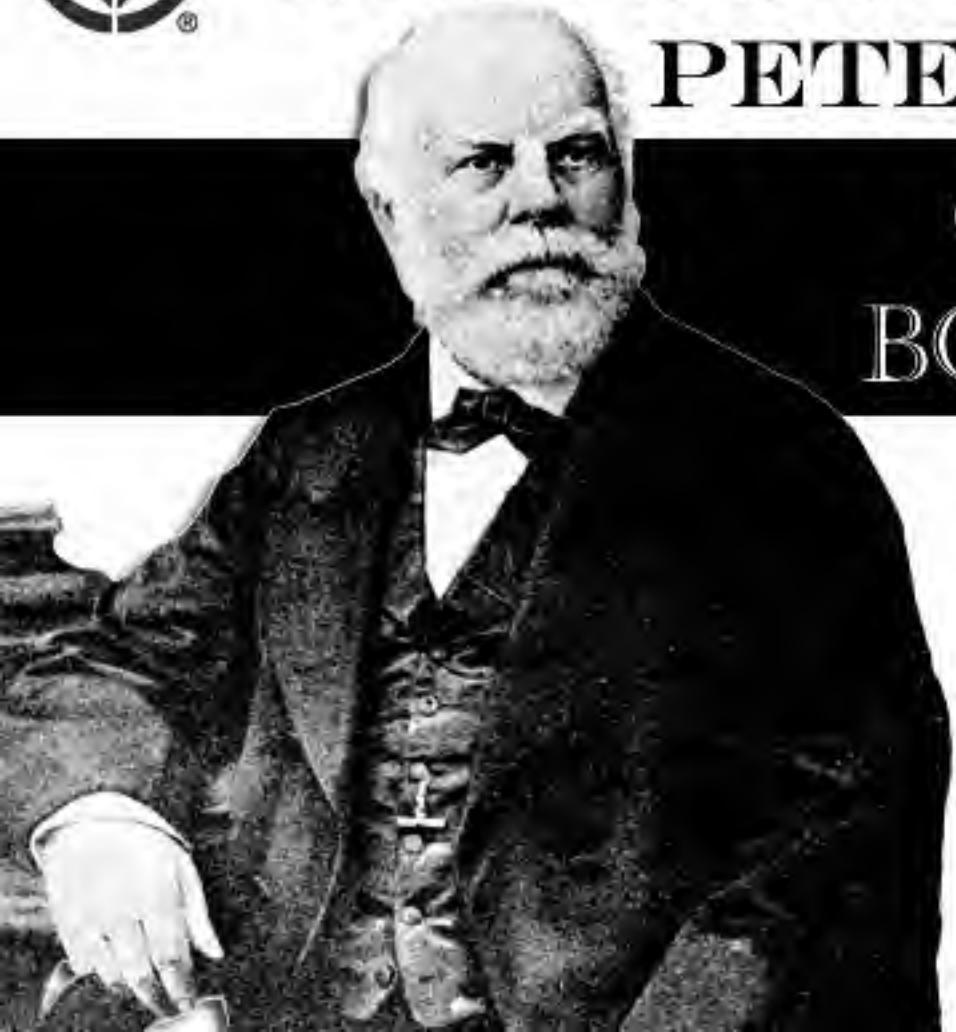




# MISSOURI BOTANICAL GARDEN

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## GEORGE ENGELMANN BOTANICAL NOTEBOOKS

*Pagination Note:*  
*Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.*

Elvyn J. Whitlock (Elvyn)

1451. *Garryana*? "Hinds" Sept acorn  
 1254. 855 undata 2m 11  
 1078 " May 12 fl. buds scales small brown  
 6061 *Garrya*? Whitch fl. buds scales big & wolly! ashy two form  
 6056 undata small brown scales mixed  
 839 undata North Debbie Sept acorn  
 125 " var *oblongifolia* s. sp. undata Jan 10 San Gabriel  
 114.115 San Gabriel Jan  
 637 (Copper)  
 (666 my herb) Anderson Valley May?  
 666 " Whitch big buds  
 1326 lobata May 22 low shrub acorn coll.  
 2916 ? Barberidopteris no label  
 (29 Palmer) " " "  
 776 ? low shrub New Idria July shrub  
 107 " San Gabriel Feb shrub  
 76 " loc. " "  
 16 " loc. " "  
 165 " loc. " 4 large  
 166 " loc. " "  
 1663 acorn locust?  
 1665 lobata?  
 2037  
 1445  
 1446  
 1467



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# MISSOURI BOTANICAL GARDEN

~~canari~~ exarata marginae acutissimulo decurre  
rente, dentibus ~~rectis~~ rigidis atropuscas  
superioribus majoribus (rectis distantibus), inferi  
oribus parvis confertis subdeflexis; panicula  
laxiflora; ovario perigonium et tubo lobos fere  
aequante, staminibus ultra medium tubo adnatis  
longe exsertis; capsula gracili prisnatia utram  
que acuta nec stipitata, anolis secundum planis  
punctulatis. — A. scabra, Salm, Bonpl. 7. 89  
Jacobi, Ag. 88.

This interesting species was discovered by Dr. A. Willigenus on the celebrated march of Doniphani's corps through northern Mexico, on the Nazas River, near San Sebastian in the south east corner of the State of Chihuahua, not far east of Parras, May 10<sup>th</sup> 1847 in fl. & fr. Living shoots were sent by me to Prince Salm and seeds to different European correspondents, among others to Prof. A. Braun of Freiburg. Two years later Gen. v. Jacobi obtained some of the young plants raised from these seeds in the botanical garden of that university and afterward communicated them to Prince Salm, who described them, <sup>1858,</sup> under the inappropriate name A. scabra, though as the general expressly states, they are as perfectly smooth <sup>on both sides \*</sup> as any other Agave \*. As thus the pub-  
<sup>asperima, Jacobi, is one of the few rough ones,</sup>  
folk note \*. The only Agave <sup>Asperima</sup>, I know, so far as known,  
and the only hairy one known, I believe, is A. pubescens, Regel.  
Aspera an exception, it A. pubescens, Regel.

This plant Mr. & Son. Moore

first described by



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Quercus of Brewster's California Fieldbook

1860 Nov. 25 19. *Quercus* (longigland?) San Luis Obispo Crabbet tree  
 24-5 46 Stubby [dumosa] San Gabriel  
 18 70 4-5 feet [dumosa] Santa Monica  
 31<sup>st</sup> 98 *Q. chrysolepis* Los Angeles 40-45' high. on 18-20'  
 1861 Jan 9 114 *Q. oblongifolia* large tree 1½-2' diam. California white oak, San Gaby  
125 same in live oak  
 12<sup>th</sup> 128 *Q. agrifolia* 10-12 even 22 feet circumference. barkless for 10 feet  
 trunk thick & dark but bars well  
 26<sup>th</sup> 137 *Q. wislizeni*? 12-18' - Chaparral 3000' alt.  
 Feb 6 165 7 *Q. dumosa* San Gabriel bark very like *Q. alba*  
 March 8 256 *Q. agrifolia* "Casino" now coming into flower  
 April 273 *Q. wislizeni* top of the live oak  
 May 30 688 *Q. chrysolepis* California live oak  
 July 8 259 *Q. montereyi* New Idria  
 18 276 *Q. dumosa* var. *ballata* New Idria, summit of San Carlos  
 " 277 *Q. chrysolepis* 20' high on sandbank " " "  
 Aug 8 819 *Q. dumosa* 1-2' diam. 80' high, San Cay Montes  
 Sept 20 839 *Q. Douglasii* North side of Mt. Diablo  
863 *Q. wislizeni* side of Mt. Diablo (same as coll from Sibley  
 1862 April 5 947 *Q. Sonomensis* Marin Co on hills common 1-2 feet  
 18<sup>th</sup> 978 *Q. Sonomensis* Sonoma rather pale bloom  
 " 978 *Q. chrysolepis* " 30' high  
 May 1 " *Q. California* <sup>Sonoma</sup> fine tree on ridge, 10' <sup>1/2</sup>" circumference  
 " *Q. Hidalgii* " 14-16 feet circumference  
 " 12<sup>th</sup> 1078 *Q. Douglasii* foothills, Mt. Diablo to 2500' height  
 bark lighter, more scaly than *Q. lobata*, habit  
 more like *Q. alba*; together with *lobata*, but bluish  
 " 1079 *Q. agrifolia* 16.  
 14 1090 *Q. wislizeni* Monte Diablo shrub 3-10'  
 1091 *Q. wislizeni* " easy culture, bark light.  
 1092 " *Q. agrifolia* <sup>wislizeni</sup> "  
 June 11 1254, 5 *Q. Douglasii* Puerto Canon  
1271 *Q. wislizeni* dwarf "  
 " 20 1286 ("*Q. palustris*") *Q. wislizeni* Pachos Pass  
 July 23 1314 *Q. agrifolia* Rockwell's  
 25 1317 *Q. wislizeni* on ridge east of Lassen Valley  
 Aug 21 1326 *Q. chrysolepis*, Shasta 1-2 feet diam.  
1327 *Q. chryssolepis* "



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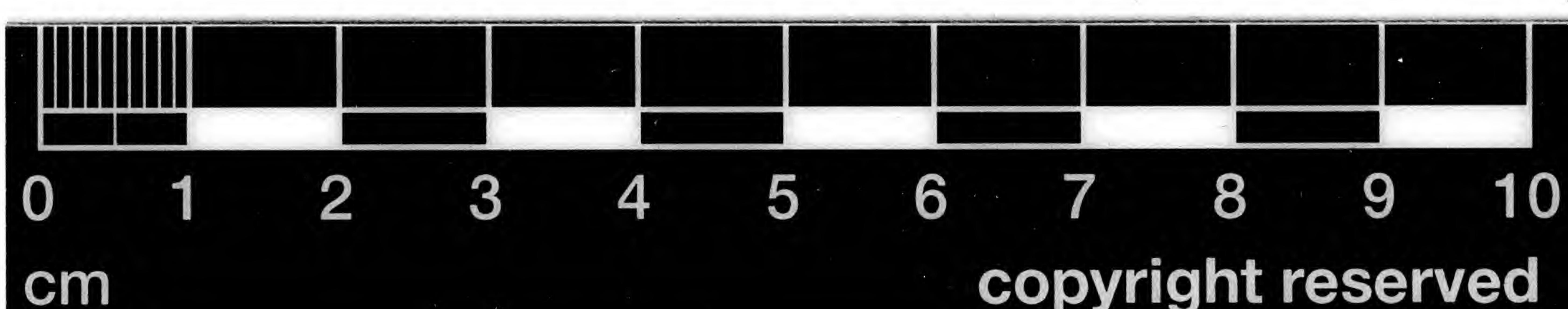
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862

Aug 21 1330 *G. Westii* hardly Shrub *no G. agrifolia* here, but much  
"G. Gambelii" (probably *Garryana*) about Red Bluff &  
overall the mostly tableland to Shasta. 1

1336 *G. Boweri* low shrub

Sept 17 1443 *G. densiflora* a bush dry hill near Soda Springs (Shasta?)

1449 " " <sup>50.</sup> Trinity Mts

1451 *G. Garryana* <sup>(as "Harrington"?)</sup> common on dry Trinity Mts

1452 *G. agrifolia* summit of Mt. Shasta - dense chaparral 3-5 feet

1455 *G. " "* " " 1 foot high. Acorns sweet - bold

Oct 2 1462 *G. "Garryana"* acorns near Shasta

1463 *G. Garryana* Cow Creek

1464 *G. "Garryana"* dry lava and ash hill near Cow Creek <sup>identical</sup>

1465 *G. lobata* Sacramento Valley near Reids Ferry

1466 *G. chrysophylla* Cow Creek, 12 feet diameter. Common - Upper Sonoran

1467 *G. Westii* (seen also in the Dibble range - mistake for *Chrysophylla*) <sup>open</sup>  
~~common~~ <sup>see notes.</sup> - upper Sonoran range bushy - common

1468 *G. chrysophylla* east fork of Feather River

1472 *G. Westii* a common species north, but not high up in the Mts  
and to be found better than in the south except *chrysophylla*

1473 *G. " "*

Oct 18 1474 *G. agrifolia* hills between Oakland & Colusa Creek

1476 *G. agrifolia* Rape

1477 *G. Sonomensis* Brown Valley.

Nov 18 1488 *G. agrifolia* <sup>San Joaquin</sup> San Jose

1489 *G. agrifolia* <sup>San Jose</sup> Santa Cruz Mts 2-5 feet diam.

1863. March 5 *G. Sonomensis* ? Santa Cruz Mts 2-5 feet diam.

*G. chrysophylla* - *G. lobata* - *G. "new agrifolia"* (Westii?) with <sup>glaucous</sup> <sup>glaucous</sup> on the leaves.

April 1<sup>st</sup> *G. lobata* a belt near Kings river (to Fort Tejon)

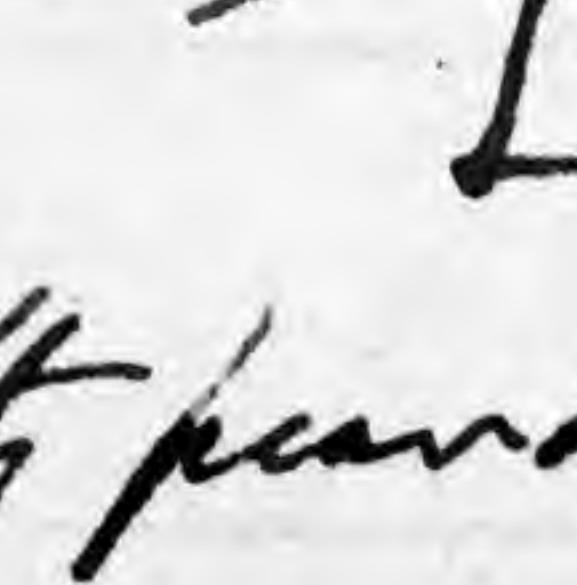
21 *G. chrysophylla* 28 feet over fence, the most magnificient yet seen.

June 18 1660 *G. chrysophylla* low bush, Yosemite 3-5 feet high

July 23 trip to Calaveras Big Trees. *G. Sonomensis* seen from several conts  
over of the Oaks going highest, to where *A. magnifica* common

30 1952 *G. agrifolia* 3-5 feet high

Oct 28 South Oregon. *G. Sonomensis* bark with white oak (tree habit)  
of *G. lobata*, but round acorns [Garryana?] bark <sup>tanning</sup> and pubescent

Oct 1 on Pitt River *G. Westii* [Garryana?] with pointed acorn  in my small cup.

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to substitute that of the discoverer of this and so many other interesting plants of western Mex. &c.

Jacobi describes his ~~plant~~ specimens, then 16 years old and, as he thinks, full grown, as  $1\frac{1}{2}$  inches high and 15 in diameter, rosulate and ~~almost~~ <sup>somewhat</sup> squarrose with broad, nearly rhombic and almost flat leaves, 5 inches long,  $3\frac{1}{2}$  wide, pale grayish green, teeth distant and curved <sup>down</sup> ~~wards~~. The ~~original~~ <sup>of the wild plant</sup> leaf, now before me, is 8 inches long and 4 wide, terminal spine to very stout, 10-11 lines long, decurrent about the same distance, arrangement of marginal teeth quite peculiar, the uppermost ones the largest  $1\frac{1}{2}$  -  $2\frac{1}{2}$  lines long from a broader base, <sup>straight</sup>, almost black and very rigid, 6-8 lines apart; teeth below the upper third smaller and closer set, and below the middle only 2-3 lines apart, less than 1 or only  $\frac{1}{2}$  line long and strongly curved downwards. Scape 12 feet high, branches of the panicle loosely <sup>ramified</sup> branched, branchlets 3-6 ~~lines~~ inches long, pedicels 1-2 lines long; flowers in small clusters, 3-6 or 8 together,  $2\frac{1}{2}$  inches long, perigon half as long, divided to the middle; stamens inserted ~~in~~ tube about  $\frac{2}{3}$  from base, <sup>it</sup> exert about  $3\frac{1}{4}$  inch above lobes, anthers 10-10 $\frac{1}{2}$  lines long. Capsule 18-22 lines long, 7-8 wide, similar to that of last species, but not stipitate; seeds  $2\frac{3}{4}$  lines in diameter, ~~the~~ cells of the surface under the microscope flat, punctulate

I have a flower and a capsule of Agaves differing from any above described, and thus perhaps indicating two other species; but as the material



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P. alliae Hb. Ceyl. Mkt

1451 fol. deltata, buds large, woolly. (coll. gland)

1336 " G. lobata " buds small, brown puberulent (coll. gland)

6061 G. undulata? Which - fl

656 " fl

1078 " fl

1254 " stipe - buds small, woolly

1255 " young shoots small, woolly (yoy) buds

839 " buds small with more woolly (coll. gland)

114 on clay soil leaves almost all entire (fris)

637 " "

125-167? " " young shoots with dentate leaf

115 " " small brown smooth buds

46 Gasteridium fr. sessile, cap very knobby, large (no acon) buds small puber brown

165-166 " leaves more entire fr sessile cap more widely spread (no acon) very granular buds small brown almost glabrous leaves dark glabrous below

70 " " probably young shoots of 165

776 " " young fruit sessile - very woolly below, same small brown buds

2916 } same as last, mature - leaves com <sup>stellate</sup> woolly on upper side fruit

all these have with large sessile acon, very knobby with granulate ~~clavate~~, obtuse scales caps especially upwards

29 small open leaves but diff fruit - peduncle, smaller, longer, with small much less knobby cap - buds small, gray woolly (see 1255)

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Oakland to Pacheco Pass (east of Monterey)  
from ~~Oakland~~ <sup>San Jose</sup> to southward many oaks, *Argylicia*, *Sonomensis*  
and *Cobaea* about equally divided (Brewer)

King's River. *G. Cobaea* fine and large (Brewer)  
Foot hills and extreme limit of the plain covered with  
*G. Douglasii* [called *Garryana*] and near the streams *G. Cobaea*  
its mountainiform <sup>up to 4000'</sup>; at 3000' all *G. Sonomensis*  
makes its appearance and continues to near 5000'.  
On the drier hills *G. Wherryi* (Brewer).



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References & Notes on oaks.Notes Vol IV

1314 1473

1317 1474

1326 1476

1327 1477

1330 1478

Sub. 1335 1488

1336 1489

Sub. 1338 sub. 1484

1443

1449 ~~=====~~

1450

1451 Vol. V

1454 first page

1455 1660

1462 + Sub. 1673

1463

1464 X " 1909.

1465

1466

1467

1468

1472

## Vol VI

75<sup>1952</sup>  
92

Sub. 2187

" 2208

## Vol VII.

Notes &amp; Voss.

## Vol VIII

Sub. 2777

" 2780

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Not found in the collector (Number of Brown).  
with to write - other.

1091

1092

1454

1462 "acorn" "pamps"

1464 " " "Garrya"

1476 "agnifolia" "acorn"

1477 "Kelloe" "acorn"

1489 "agnifolia" "acorn"

not found in the Catalog - Number for & Coll.

2916

2730

473

1314 agnifolia J. G.

4466

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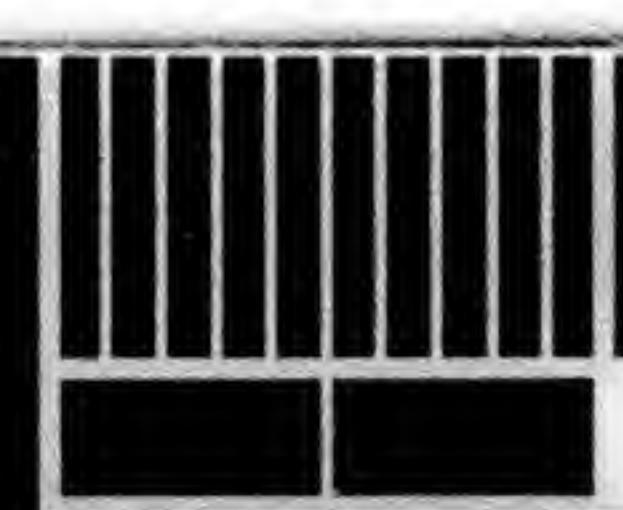
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Brewer's name	Number	is
Hinda "	1451	Garrya Garryana
Garryana ?	1253	Douglasii
no name	1078	Douglasii
Hinda "	839	Douglasii
Hinda "	us number, Cottonwood outcrop only.	Cottonwood in Georgia ?
?	River Danube	Garryana ?
Garryana		Garrya ?
Hinda "	Sacramento Valley -	Cobaea
Garryana	1463	Garryana ?
small Hinda ?	0336	Breweri



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bracts, both work, on *P. ponderosa* from Biglow, Yosemite  
on the one side, also in Oregon, Douglas, Oregon.

*P. ponderosa*, Penn Valley common, also in Oregon, Oregon, Oregon.  
and on *P. ponderosa* ( *P. abietinum* C. Chr. or *P. Hall* ), also on *P. ponderosa*  
on High Mountain, Oregon. — *P. ponderosa* type, *P. ponderosa* in Nor. —

The closely allied *P. virginiana* L. C. L. in that the Virgin Host  
of which my very incomplete material has been reduced  
of the pines woods of the Mexican mountains has shorter spikes,  
smaller, mostly 3-lobed staminate flowers, with broader, shorter lobes.

*P. robustum*, L. C. L. on *P. ponderosa* of the Rocky Mountains and Arizona  
monocotyledonous, has shorter spikes, <sup>shorter</sup> spikes, apparently male flowers, broader  
shorter lobes of the flowers, shorter bearing the anthers above the middle.



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Dr. Palmer's Notes. 1875

1. "Abies Douglasii. - San Felipe Canon. Grows on the sides of the canon. Its attractive feature is its branches which grow straight from the body and of all lengths, after the manner of Pinus lambertiana." [I believe no specimen was found. s.w.]
2. "Pinus grandis. - Moist and shady places of the Cuyamaca Mts. Not a perfect cone, young or old could be obtained." [No specimen found. s.w.]
3. "Libocedrus decurrens. - Commonly called White Cedar. Very abundant in the Cuyamaca Mts. It is a beautiful tree, producing fine lumber, which makes excellent bee-hives." [No specimen sent.]
4. "Pinus Coulteri or macrocarpa. - Talley's Ranch. The commonest of all pines on the Cuyamaca Mts. It yields good strong lumber which holds nails with great tenacity." [Some fine cones, of which one is retained here for you.]
5. "Pinus ponderosa. - Rather rare on the Cuyamaca Mts. no seed could be found. A knotty large tree, its lumber inferior."



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6. "Pinus lambertiana. — Sugar pine. Not very abundant on the Cugamaca Mts. Since the establishment of saw mills there all the large trees have disappeared. There are but few small ones, & no cones were seen with seeds". [No specimen found.]

7. "Pinus Torreyana. — Hills of Sonora, not very abundant and seen in no other locality. About 45 feet high. Its characteristic feature is the peculiar, <sup>irregular</sup> manner of branching. Sometimes a branch grows out just above ground, extending sword-like straight out, above which may be shorter ones, and then another extending beyond them, & so on. Fruit found on bottom and top of the tree". [Some fine cones, of which one is retained for you.]

8. "Pinus edulis or laurana. — Eatable pine. Abundant on the Jacumba Mts. and the Tepillas of Lower California. Not very large nor tall, but the young trees have a very even trim appearance. It produces the choicest article of Indian Dishes."

9. "Oak, not known. — Talley's Ranch. Near watercourses. Large fine durable timber, easily worked. Young trees with very thorny leaves, becoming smooth [unarmed] with age, as shown by the specimens. Fruit immature".



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10. "Oak, not known. - On hillsides or Tally's Ranch. Not very large but very tough timber. As in (9.) leaves of young trees with thorns, which disappear with age. Fruit immature."

11. "Quercus sonomensis. - A fine large showy oak on the mountains about Julian. Very prolific. Fruit immature."

12. "Oak, not known. - Abundant about the Cuyamaca Mts. A large wide-spreading tree, the most picturesque of all the oaks. It will bear being deprived of its limbs when it will throw out new ones and look like a young tree. Specimens from San Felipe Canon. Fruit immature."

13(E). "Yucca baccata. - Thirteen miles east of San Felipe Canon. ~~the largest plants of such.~~" Fiber for blankets. It is prepared from the leaves, <sup>and stem</sup> by the Indians, by soaking in water and pounding with wooden mallets. A softer fiber is prepared from the green Whips. Slices of the stems are used for soap - when pounded up it cleans mother garments and blankets very nicely. The fruit is mealy, rather sweet, with a slight bitterness, and is eaten both fresh and dried by the Indians. It possesses cathartic properties. The seeds are also reduced to flour and eaten. Owing to the shape of the fruit it is by many called Banana.



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19. "Juniperus tetragona. - Out of San Felipe Cañon. A dwarf bushy tree, very prolific. The Indians consume large quantities of the fruit, which are very sweet."

29. "Dwarf oak. - About 8 feet high, compact, very fine green leaves. Acorns small, sweet as chestnuts; some sprouted in the cups. Tantil-Las Mts."

30. "A showy, very thorny leaved oak, many stems together, 8-10 feet high. Large acorns, not ripe. At Larkeris and Las Grutas."

59. "Beautiful oak. - Murphy's Cañon. Six feet high, the branches hanging gracefully. No perfect fruit."

60. "Oak, dwarf. - Murphy's Cañon. Much the habit of (62.) No perfect live fruit."

61. "oak. - Murphy's Cañon. About 8 feet high. Its small leaves, compact habit, and small acorns render it attractive. Few live acorns, owing to the dry season, and the leaves fall off prematurely."

62. "Dwarf oak. - Murphy's Cañon. Irregular growth, very coarse. But few fruit, mostly immature.

63. "Dwarf oak. - Murphy's Cañon. Upright growth, showy, trim-looking. More fruit than the others.

80. "Quercus agrifolia. - Hot Springs" [not found.]

82. "Cactus seed - with a pin of the plant" [not found.]



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85. "Parasite from the *Juniperus trigona*. - steeped in water and applied to the hair, to give it a fine gloss. Much used by the Indians". [not found.]

86. "*Agave deserti*, n.sp., full size. Larkins."

86a. "Leaves of same. Fiber easily prepared either by the dry or wet process".

88 (7.) "Flowering plants and flowers of same. A few miles E. of San Felipe Canon the flowering stem of a large plant had some time previously been cut off, and two offshoots had thrown out short flowering stems and were found in bloom". The heart of the plant is roasted, is full of sugar, and the finest article of Indian food. When roasted it is also mashed up with water, allowed to ferment, and "mescal" obtained by distillation - a strong fiery smoky-tasted liquor, with the taste of Scotch whisky but much stronger.

89. "*Agave Shawii*. - Above the Boundary Monument, near San Diego - the most attractive of all the Agaves."

90. "*Yucca whipplei*. Grows on the rocky hills of - San Diego County". [not found.]

97. "Small plant, very brittle. Big Canon of - Tumillas Mts."

140. "Talley's Ranch, Valley of Cuyamaca Mts."

147. "Hill slopes and river valleys - Boundary Monument near S. Diego."



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145. "Among underbrush, edges of creeks, near Boundary Monument."

163. "Big Canon of Tantillas Mts."

187. "low places, near creeks - Larkins."

207. "Big canon, Tantillas Mts."

209. "Ravines, " "

213. "Cupressus macrocarpa. - Jamul Valley". [not found.]

215. "Quercus crassirocula. - Large thick cups and fruit".  
[not yet rec.]

216. "Pinus Benthiniana". [not found.]

217. "Dwarf oak, 10 feet high, a wide bush, coarse. Fruit scarce.  
Murphy's Canon."

218. "Dwarf oak, 8 feet high. Straight growth. Fruit small.  
Larkins".

234. "Eremocarpus setigerus". - Dry bottoms, San Diego".

270. "Grows on the Mesquite. Canon Tantillas."

271. "on Pinus ponderosa. Cuyamaca Mts."

272. "on the crooked mesquite" " "

273. "on Juniperus tetragona. Tantillas Mts."



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## Localities

Murphy's Cañon is near the old San Diego Mission,  
6 miles from San Diego.

Solidot is 15 miles N.E. from San Diego.

Janul Valley is 20 miles E. of S. of S. Diego.

Julian is 60 miles N.E. from S. Diego.

Talley's Ranch in Stockton Valley, Cuyamaca  
Mts., 5 miles from Julian.

San Felipe Cañon, 6 miles E. of Julian.

Larkins Station (Old Stone House), near Jacumba  
Mts., 80 miles E. of San Diego on the Fort Yuma  
Road.

Las Quantras, Lower California, in Tecate Valley, 43  
miles E. of San Diego.

Tanillas <sup>Mountains</sup> and its Big Cañon, which is 5,000 feet deep,  
very rough and without road, 34 miles from the  
lask, in Lower California, and nearly south of  
Larkins.



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Notes on Genera of California  
& their exclusive localities in  
Bolander's letter of June 8 1865-  
which see among Papers relating  
to *Pinus*.



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MISSOURI BOTANICAL GARDEN  
GEORGE ENGELMANN PAPERS



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MISSOURI  
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GARDEN